

Grant Guidelines To States
For Implementing The
Secondary Containment Provision
Of The Energy Policy Act Of 2005

U.S. Environmental Protection Agency
Office of Underground Storage Tanks
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www.epa.gov/oust

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Overview Of The Secondary Containment Grant Guidelines

Why Is EPA Issuing These Guidelines?

The U.S. Environmental Protection Agency (EPA), in consultation with states, developed these grant guidelines to implement the secondary containment provision in Section 9003(i)(1) of the Solid Waste Disposal Act (SWDA), enacted by the Underground Storage Tank Compliance Act, part of the Energy Policy Act of 2005 signed by President Bush on August 8, 2005.

Section 1530 of the Energy Policy Act amends Section 9003 in Subtitle I of the Solid Waste Disposal Act to add requirements for additional measures to protect groundwater from contamination. In order to be in compliance with statutory requirements applicable to Subtitle I, state underground storage tank (UST) programs must, at a minimum, implement *either* the secondary containment and under-dispenser containment requirements in these guidelines *or* the financial responsibility and installer certification requirements described in separate guidelines. EPA must require each state that receives funding under Subtitle I meet, at a minimum, *one* of the following:

1. *Tank And Piping Secondary Containment* – Each new underground storage tank, or piping connected to any such new tank, that is within 1,000 feet of any existing community water system or any existing potable drinking water well must be secondarily contained and monitored for leaks. In the case of a replacement of an existing underground storage tank or existing piping connected to the underground storage tank, the secondary containment and monitoring shall apply only to the specific underground storage tank or piping being replaced, not to other underground storage tanks and connected pipes comprising such system. In addition, each new motor fuel dispenser system installed within 1,000 feet of any existing community water system or any existing potable drinking water well must have under-dispenser containment. These requirements do not apply to repairs meant to restore an underground storage tank, pipe, or dispenser to operating condition.

Or,

2. *Evidence Of Financial Responsibility And Certification* – A person that manufactures an underground storage tank or piping for an underground storage tank system or installs an underground storage tank system must maintain evidence of financial responsibility under Section 9003(d) of Subtitle I in order to provide for the costs of corrective actions directly related to releases caused by improper manufacture or installation unless the person can demonstrate

themselves to be already covered as an owner or operator of an underground storage tank under Section 9003 of Subtitle I. In addition, installers must be certified, or they must certify the installation of underground storage tank systems they install. These provisions do not affect or alter the liability of any owner or operator of an underground storage tank. Owners and operators must still comply with all technical regulations. For example, they must comply with the requirements to report a release and perform all necessary corrective action and to maintain financial responsibility to pay for corrective action and compensate third parties.

EPA's Office of Underground Storage Tanks (OUST) is issuing these grant guidelines to establish the minimum requirements states must meet in order to comply with the secondary containment requirements in the Energy Policy Act.

What Is In These Guidelines?

These guidelines describe the minimum requirements for secondary containment that a state's underground storage tank program must contain in order for a state to comply with statutory requirements for Subtitle I. These guidelines include definitions, requirements, and examples for states choosing to implement the secondary containment provision.

When Do These Guidelines Take Effect?

States must implement *either* the secondary containment requirements described in these guidelines *or* the financial responsibility and installer certification requirements (described in separate guidelines) by February 8, 2007.

Requirements For Secondary Containment

What Tanks, Piping, And Motor Fuel Dispenser Systems Do These Guidelines Apply To?

These guidelines apply to tanks and piping regulated under Subtitle I except those excluded by regulation at 40 CFR 280.10(b) and those deferred by regulation at 40 CFR 280.10(c). Tanks used for emergency power generation [deferred from release detection by 280.10(d)] and piping using a suction system for product delivery must meet these guidelines. These guidelines also apply to new motor fuel dispenser systems connected to tanks and piping covered by these guidelines.

What Definitions Are Used In These Guidelines?

The following are definitions for purposes of these guidelines.

Community Water System (CWS) – A public water system that –

- (A) serves at least 15 service connections used by year-round residents of the area served by the system; or
- (B) regularly serves at least 25 year-round residents.

The definition of community water system was taken from the Safe Drinking Water Act, Section 1401(15). For purposes of these guidelines, the following are included as part of the community water system for purposes of measuring the 1,000 feet distance:

- The wellhead for groundwater and/or intake point(s) for surface water;
- Collection, treatment, storage, and distribution facilities that are part of the community water system; and
- The piping distribution system that delivers the water to the community.

Existing – For purposes of these guidelines, existing means that a tank, piping, motor fuel dispensing system, facility, community water system or potable drinking water well is in place when a new installation or replacement of a tank, piping, or motor fuel dispensing system begins.

Installation Of A New Motor Fuel Dispenser System – The installation of a new motor fuel dispenser and the equipment necessary to connect the dispenser to the underground storage tank system. It does not mean the installation of a motor fuel dispenser installed separately from the equipment needed to connect the dispenser to the underground storage tank system. For purposes of these guidelines, this equipment may include flexible connectors, risers, or other transitional components that are beneath the dispenser and connect the dispenser to the piping.

Motor Fuel – Petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any grade of gasohol, and is typically used in the operation of a motor engine.

Piping – For purposes of these guidelines, piping is the hollow cylinder or the tubular conduit constructed of non-earthen materials that routinely contains and conveys regulated substances from the tank(s) to the dispenser(s) or other end-use equipment. It does not mean vent, vapor recovery, or fill lines that do not routinely contain regulated substances.

Potable Drinking Water Well – Any hole (dug, driven, drilled, or bored) that extends into the earth until it meets a water-bearing formation (aquifer) consisting solely of groundwater or groundwater under the direct influence of surface water that provides water deemed suitable for people to drink in its ambient state or after treatment as approved by the state or local authority having jurisdiction over such wells. Such wells may be either privately or publicly owned and may provide water to a single-family residence, a group of residences, or a community. The definition of potable drinking water well was developed by EPA's Office of Water.

Replace – This term applies to underground storage tanks, piping, and motor fuel dispenser systems.

Underground storage tank– Replace means to remove an existing tank and install a new tank¹.

Piping – Replace means to remove and put back in an amount of piping associated with a single underground storage tank defined by the state to be a replacement. States may determine the amount of piping associated with a single tank that triggers replacement by piping length, percent of piping replaced, percent of piping replacement cost, or some combination of these. At a minimum, states must consider a piping replacement to have occurred when 100 percent of the piping associated with a single underground storage tank is removed and put back in.

Motor fuel dispenser systems – Replace means to remove an existing dispenser and the equipment necessary to connect the dispenser to the underground storage tank system and install a new dispenser and the equipment necessary to connect the dispenser to the underground storage tank system. For purposes of these guidelines, this equipment may include flexible connectors, risers, or other transitional components that are beneath the dispenser and connect the dispenser to the piping.

Note: EPA is seeking input from commenters on an alternate definition of replace for piping. Please provide any input you might have on this alternative:

¹ A new tank is a tank that meets the new tank standards in 40 CFR 280.20, whether or not the tank was ever used before.

With respect to piping, replace means to repair or otherwise remove and put back in more than 5 feet of piping associated with a single underground storage tank system within a 30-day period. Justification: Tank and dispenser sumps typically contain 5 feet or less of piping that can be fixed without digging or breaking concrete. In addition, repairs to piping usually occur on small lengths of piping.

Secondarily-Contained – A release detection and prevention system that meets the requirements of 40 CFR 280.43(g) but shall not include under-dispenser spill containment or control systems.

Under-Dispenser Containment (UDC) – Containment underneath a dispenser that will prevent leaks from the dispenser from reaching soil or groundwater. Such containment must:

- Be liquid-tight on its sides, bottom, and at any penetrations;
- Be compatible with the substance conveyed by the piping; and
- Allow for visual inspection and access to the components in the containment system.

Underground Storage Tank (UST) – This term has the same meaning given to it in Section 9001 of Subtitle I, except that such term does not include tank combinations or more than a single underground pipe connected to a tank. For purposes of these guidelines, this term does not include those tanks identified in 40 CFR 280.10 (b) and 280.10 (c) as excluded or deferred underground storage tanks.

What Is Tank And Piping Secondary Containment?

For purposes of these guidelines, secondary containment means that an underground storage tank and/or piping have both a release prevention system and a release detection system (i.e., interstitial monitoring). The release prevention part of secondary containment is a tank and/or pipe that have an inner and outer barrier. Between these two barriers is a space for monitoring. The release detection part of secondary containment is a method of monitoring the space between the inner and outer barriers for a leak or release of regulated substances from the primary wall (called interstitial monitoring). Interstitial monitoring must meet the release detection requirements in 40 CFR 280.43(g).

Current EPA regulations [see 40 CFR 280.42 (b) (1)] for hazardous substance tanks and piping require secondary containment systems be designed, constructed, and installed to:

- Contain regulated substances released from the tank system until they are detected and removed,
- Prevent the release of regulated substances to the environment at any time during the operational life of the underground storage tank system, and
- Be checked for evidence of a release at least every 30 days.

These requirements should also apply to new tank and piping installations covered by these guidelines. Therefore, states must have requirements in place to ensure that secondarily-contained tanks and piping will contain a release until it is detected and removed, that tanks and piping will prevent a release to the environment at any time during the operational life of the underground storage tank system, and that tanks and piping are checked for evidence of a release at least every 30 days. For example, one way states may meet this requirement is to require interstitial monitoring to be used that checks for evidence of a release at least every 30 days and is able to detect a breach in both barriers (for example, by pressure, vacuum, or liquid-filled interstitial spaces).

The Energy Policy Act does not require dispenser sumps to be included as part of the secondary containment requirement for piping. Under-dispenser containment is required when installing a new motor fuel dispenser system, but the under-dispenser containment requirement does not trigger the secondary containment requirement for the existing piping system. However, in cases where piping secondary containment is required, under-dispenser containment may be necessary for secondary containment of the piping near the dispenser.

The following is an example of tanks that meet the release prevention part of the secondary containment requirement:

Tanks having secondary containment that meet, at a minimum, a code of practice developed by a nationally-recognized association or independent testing laboratory. Examples of standards include, but are not limited to:

- Underwriters Laboratories (UL) Standard 58 (Steel Underground Tanks for Flammable and Combustible Liquids),
- UL Standard 1316 (Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures), and
- Steel Tank Institute Standard F841 (Standard for Dual Wall Underground Steel Storage Tanks).

The following is an example of piping that meets the release prevention part of the secondary containment requirement:

Piping having secondary containment that meets, at a minimum, a code of practice developed by a nationally-recognized association or independent testing laboratory. Examples of standards include, but are not limited to:

- UL Standard 971 (Nonmetallic Underground Piping for Flammable Liquids).

Such piping may be:

- 100 percent secondarily contained or
- Secondarily-contained piping with single-walled piping ends that terminate in tank and dispenser sumps.

The following are some examples that meet the interstitial monitoring (monitored at least every 30 days) part of the secondary containment requirement:

- Systems that place the interstitial space under vacuum or pressure,
- Liquid-filled interstitial spaces,
- Monitoring devices between the inner and outer barriers of the tanks and piping that can detect a leak or release of product from the primary barrier, and
- Manually monitored interstitial spaces.

The following are some examples of tank, piping, and release detection systems that do not meet the secondary containment requirement.

- Tanks and piping that do not meet a code of practice developed by a nationally-recognized association or independent testing laboratory for secondary containment.
- Single-walled piping installed in a chase (a larger diameter pipe which the single-walled piping is pulled through) where the chase has not been determined (such as by recognition by the manufacturer or the implementing agency) to be adequate as secondary containment.
- Tanks with an internally-fitted liner that are not monitored for release detection with an automated device.

Where Is Secondary Containment Required?

For new underground storage tank installations, secondary containment, including interstitial monitoring, is required for each storage tank and associated piping that is within 1,000 feet of any existing community water system or any existing potable drinking water well. If an existing tank is replaced, the secondary containment and interstitial monitoring requirement applies only to the new tank. If existing piping associated with an underground storage tank is replaced, the secondary containment and interstitial monitoring requirement applies to all of the piping associated with that tank, not to existing piping associated with other underground storage tanks. If an existing tank and associated piping are replaced, the secondary containment and interstitial monitoring requirement applies to the new tank and all piping associated with that tank. In addition, each new motor fuel dispenser system installed within 1,000 feet of any existing community water system or any existing potable drinking water well must have under-dispenser containment. States are not required to apply the requirements in these guidelines to repairs meant to restore a tank, piping, or dispenser to operating condition.

Special Case #1: If a new motor fuel dispenser system is installed at an existing underground storage tank facility and new piping is added to the underground storage tank system to connect the new dispenser to the existing system, then that new piping must meet the secondary containment requirements (including interstitial monitoring) described in these guidelines. However, the existing piping to which the new piping is

connected is not required to meet the secondary containment requirements in these guidelines.

Special Case #2 – New underground storage tank facilities: If a new underground storage tank facility will be installed that is not within 1,000 feet of any existing community water system or any existing potable drinking water well **and** the owner will install a potable drinking water well within 1,000 feet of the tanks, piping, or motor fuel dispenser systems as part of the new underground storage tank facility installation, then secondary containment and under-dispenser containment are required, regardless of whether the well is installed before or after the tanks, piping, and motor fuel dispenser systems.

Although not required by these guidelines, states may want to consider the following when developing secondary containment and under-dispenser containment requirements for new and replaced tanks, piping, and motor fuel dispenser systems:

- Designated source water protection areas,
- Drinking water sources such as natural springs and surface waters, and
- Planned locations for new community water systems and new potable drinking water wells.

EPA encourages state underground storage tank programs to work with state agencies with responsibility for drinking water programs and state well permitting authorities to protect source water and other sensitive areas.

What Is The Difference Between Repair And Replace For Underground Tanks, Piping, And Motor Fuel Dispenser Systems?

This section describes the difference between repair and replace for underground tanks, piping, and motor fuel dispenser systems described in these guidelines. Underground tanks and piping that are replaced and are within 1,000 feet of any existing community water system or any existing potable drinking water well must be secondarily contained. Likewise, motor fuel dispenser systems that are replaced and are within 1,000 feet of any existing community water system or any existing potable drinking water well must have under-dispenser containment. For purposes of these guidelines, a repair is any activity that does not meet the definition of replace. The replace definitions for tanks, piping, and motor fuel dispenser systems are discussed in the paragraphs below.

Underground Tanks – A tank is considered to have been replaced when the entire tank is removed and a new tank is put in the ground. Replaced tanks that are within 1,000 feet of an existing community water system or existing potable drinking water well must be secondarily contained (including interstitial monitoring). Repairing an existing underground tank where the entire tank is not removed does not require that the existing tank be replaced with a secondarily-contained tank.

Piping – These guidelines provide states with flexibility in defining replace for piping. Replace for piping means to remove and put back in an amount of piping associated with a single underground storage tank as defined by the state to be a replacement. States may choose to define replace using length of piping, a percentage of piping, a percentage of piping replacement cost, or some combination of these. At a minimum, states must consider a piping replacement to have occurred when 100 percent of the piping associated with a single underground storage tank is removed and put back in. When the replace definition is triggered for existing piping, all the piping associated with the underground storage tank must be secondarily contained and have interstitial monitoring.

Motor Fuel Dispenser Systems – A motor fuel dispenser system is considered to have been replaced when an existing dispenser and the equipment necessary to connect the dispenser to the underground storage tank system are removed and another dispenser and the equipment necessary to connect the dispenser to the underground storage tank system are put in its place. For purposes of these guidelines, this equipment may include flexible connectors, risers, or other transitional components that are beneath the dispenser and connect the dispenser to the piping. Repairs to an existing dispenser where the entire dispenser and the equipment that connects the dispenser to the piping are not replaced do not trigger the under-dispenser containment requirement.

What Are The Requirements For Motor Fuel Dispenser Systems?

New or replaced motor fuel dispenser systems must have under-dispenser containment if the new dispenser is located within 1,000 feet of an existing community water system or existing potable drinking water well. A motor fuel dispenser system is considered new or replaced when:

1. A dispenser is installed at a location where there previously was no dispenser (new underground storage tank facility or new dispenser location at an existing underground storage tank facility), or
2. An existing dispenser is removed and replaced with another dispenser and the equipment used to connect the dispenser to the underground storage tank system is replaced. This equipment may include flexible connectors, risers, or other transitional components that are beneath the dispenser and connect the dispenser to the piping.

The following are several examples of when under-dispenser containment is not required for motor fuel dispenser systems within 1,000 feet of an existing community water system or existing potable drinking water well.

- An existing dispenser is repaired.
- An existing dispenser is replaced with another dispenser and existing equipment is used to connect the dispenser to the underground storage tank system.

How May States Determine If An Underground Tank, Piping, Or Motor Fuel Dispenser System Is Within 1,000 Feet Of An Existing Community Water System Or Existing Potable Drinking Water Well?

Unless a state underground storage tank program requires secondary containment for all new installations and replacements, the state must have a system in place for determining when a tank, piping, or motor fuel dispenser system is within 1,000 feet of an existing community water system or existing potable drinking water well. There are various options for making this determination. The following are some examples for meeting this requirement.

- States may determine, or establish criteria for determining, when new or replaced tanks, piping, or motor fuel dispenser systems are within 1,000 feet.
- States may designate another entity to determine whether a motor fuel dispenser system, tank, or piping is within 1,000 feet.
- States may require that owners or operators show or prove that their motor fuel dispenser system, tank, or piping is not within 1,000 feet. The absence of proof means that the tank, piping, or dispenser is considered to be within 1,000 feet and must meet the additional measures to protect groundwater requirement.

EPA encourages state underground storage tank programs to work with state agencies with responsibility for drinking water programs and state well permitting authorities to help determine and ensure that the within 1,000 feet requirement is being met. In addition, local underground utility locator services may be able to provide assistance in locating underground water piping for community water systems.

How Will The State Underground Storage Tank Program Ensure That Under-Dispenser Containment And Secondary Containment Are Installed When Required?

To ensure the requirements for secondary containment and under-dispenser containment are met, state underground storage tank agencies may need to require that owners or operators notify the state before installing or replacing a tank, piping, or motor fuel dispenser system. Currently, EPA requires notification within 30 days of bringing an underground storage tank system into operation. EPA does not have a notification requirement prior to installing an underground storage tank. In addition, EPA currently has no notification requirement for dispenser installation or replacement. As a result, for states that have notification requirements no more stringent than EPA, tanks, piping, or dispensers requiring secondary containment or under-dispenser containment might be installed without secondary containment or under-dispenser containment. Unless a state underground storage tank program requires secondary containment and under-dispenser containment for all new installations and replacements, the state must establish requirements for ensuring secondary containment and under-dispenser containment are installed where required. The following are examples states may

choose to implement to help ensure compliance with the requirements in these guidelines.

- Require pre-notification for owners and operators (for example, some states require permitting before new installations may begin).
- Require the installer to notify the state before installation, replacement, or repair.
- Require installer certification where installers must install secondary containment systems where appropriate.

EPA encourages state underground storage tank programs to work with state agencies that regulate motor fuel dispenser systems to ensure that the requirements in these guidelines are met.

May State Underground Storage Tank Agencies Choose To Implement Requirements More Stringent Than Those Described In These Guidelines?

State underground storage tank agencies may choose to develop more stringent requirements than described in these guidelines. For example, states may choose to require secondary containment for all new installations and replacements; if a state chooses this option, then issues such as determining the within 1,000 feet proximity and advance notification are no longer considerations because secondary containment is required at all installations and replacements. Likewise, states may choose to develop more stringent definitions. For example, states may decide that any repair activity constitutes replacement.

What Enforcement Authority Must States Have For Secondary Containment?

At a minimum, states must have the same enforcement authorities for violations of their secondary containment requirements as they have for violations of current underground storage tank requirements.

How Will States Demonstrate Compliance With These Guidelines?

After February 8, 2007, the effective date of the secondary containment requirements, and before receiving future grant funding, states must provide one of the following to EPA:

- For a state that has met the requirements for secondary containment, the state must submit a certification indicating that the state meets the requirements in the guidelines.
- For a state that has not yet met the requirements for secondary containment, the state must provide a document that describes the state's efforts to meet the requirements. This document must include:
 - A description of the state's activities to date to meet the requirements in the guidelines;

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- A description of the state's planned activities to meet the requirements;
and
 - The date by which the state expects to meet the requirements.

How Will EPA Enforce States' Compliance With The Requirements In These Guidelines?

As a matter of law, each state that receives funding under Subtitle I, which would include a Leaking Underground Storage Tank (LUST) Cooperative Agreement, must comply with the underground storage tank requirements of the Energy Policy Act. EPA anticipates State and Tribal Assistance Grants (STAG) funds will be available under the 2007 Appropriations Act for certain purposes authorized by the Energy Policy Act, and EPA will condition STAG grants with compliance with these guidelines. Absent a compelling reason to the contrary, EPA expects to address noncompliance with these STAG grant conditions by utilizing EPA's grant enforcement authorities under 40 CFR Part 31.43, as necessary and appropriate.

For More Information About The Secondary Containment Grant Guidelines

Visit the EPA Office of Underground Storage Tanks' web site at www.epa.gov/oust or call 703-603-9900.

Background About The Energy Policy Act Of 2005

On August 8, 2005, President Bush signed the Energy Policy Act of 2005. Title XV, Subtitle B of this act (entitled the Underground Storage Tank Compliance Act) contains amendments to Subtitle I of the Solid Waste Disposal Act – the original legislation that created the underground storage tank (UST) program. This new law significantly affects federal and state underground storage tank programs, will require major changes to the programs, and is aimed at reducing underground storage tank releases to our environment.

The underground storage tank provisions of the Energy Policy Act focus on preventing releases. Among other things, it expands eligible uses of the Leaking Underground Storage Tank (LUST) Trust Fund and includes provisions regarding inspections, operator training, delivery prohibition, secondary containment and financial responsibility, and cleanup of releases that contain oxygenated fuel additives.

Some of these provisions require implementation by August 2006; others will require implementation in subsequent years. To implement the new law, EPA and states will work closely with tribes, other federal agencies, tank owners and operators, and other stakeholders to bring about the mandated changes affecting underground storage tank facilities.

To see the full text of this new legislation and for more information about EPA's work to implement the underground storage tank provisions of the law, see: http://www.epa.gov/oust/fedlaws/nrg05_01.htm